Remarks:

35 U.S.C §112 Rejections:

In Claims 1, 7 and 19 the terms "materials requirements planning", "manufacturing resource planning" and "management information systems" have been included to establish the concise meaning of the terms "MRP", "MRP II" and "MIS". In addition, the term "temporarily" has been removed for clarity purposes.

35 U.S.C. § 103 Rejections:

As to the rejections of claims 1, 7, 13 and 19, the Ferreri patent discloses a process for identifying deviations or errors of a forecasted product demand schedule by comparing the forecasted demand, as run by the MRP system, to the historical order levels for a given component (see abstract). In Column 4, lines 4 through 18: "In item 112, the invention generates the supply and demand history for the components. This history data includes information regarding how much of a specific component is purchased during a given time period and can include maximums, minimums, averages, etc. Then, in item 114, the invention runs the material requirement planning tool in a simulated mode, which produces data regarding the number of each component that will be ordered (depending upon sales forecasts and other similar information regarding volume of different products that will be produced by the corporation). Current runs are saved and become history to do a compare with the next run or cycle. In item 116, the invention produces a churn report based upon a comparison of the demand history for each component with the purchasing amounts produced by the simulated MRP."

As is well known and understood in the art, the historical demand is the prior period(s) actual order demand. The forecasted demand is that demand based upon the sales actual orders for the upcoming period combined with sale's forecasted demand for the upcoming period. In generating the forecasted demand, Ferreri's process utilizes the MRP's tools to calculate the order size for any given part. These order sizes are all based

upon what is well known in the art as the "economic order quantity" inherent to the current MRP tools. Essentially, after taking into account all of the existing orders, forecasted sales, available parts on hand and parts on order, the MRP systems determines the order quantity by balancing the costs of setting up and running a given part with the costs associated with carrying excess inventory on hand over a period of time, thereby minimizing total costs. Ferreri then utilizes the economic order quantity produced thereby to compare it to the historical numbers for the same part to look for possible deviation or error.

This economic order quantity is the only MRP tool utilized to determine how many of a given part should be ordered or produced and has been the only means for determining the order quantity for at least the past 60 years, other than purely manual intervention by choosing a number for a specific part and over riding the MRP system generated number.

The present invention presents a new tool for determining what the order quantity for a given product or part should be based upon the primary strategic objective of the entity, not the economic order quantity. This is accomplished by utilizing the forecasted demand for all orders in two different simulations. The first time, all of the forecasted orders are run and the order sizes and output are determined as if the forecasted orders were run *and shipped to customers*. The results of these theoretical shipments are then used to determine what the impact would have been on the primary strategic objective. For example only, if the primary strategic objective was reducing leadtimes, then the theoretical shipments could be calculated to determine what the theoretical leadtime results *would have been* for the forecasted orders if they had been made and shipped. The second time the MRP is run, a given product or part is removed from the forecast and the forecast run again as if the parts were run and shipped to customers. Once again, the theoretical results from this second run are calculated in terms of the primary strategic example as if the parts had been made and shipped. Continuing with the example, the theoretical leadtime results for the second run, less the specified part, are determined. By then taking the first theoretical results and subtracting the second theoretical results (in leadtimes for our example) we end up with a difference in leadtimes related directly and

solely to the excluded part. This difference can then be used to determine the optimum

lot size for the specified part that optimizes the primary strategic objective (leadtimes in

the above example). Thus, in the present invention, the MRP tools are utilized with

additional criteria in order to determine what the correct lot sizes should be, independent

of the historical usage and independent of the economic order quantity.

As to Ferreri disclosing the steps of:

    a. selecting a primary strategic objective;

    b. listing the possible strategic objective measure; and

    c. selecting the primary strategic objective measure and calculation,

none of those are what Ferreri is disclosing or doing. Ferreri discloses selecting a high

level *part* for the comparison with the historical usage to look for deviation - column 3,

lines 27 through 45, and allows any means for selecting *which part to use* for comparison

purposes with the historical usages of that same part. However, none of that discloses

looking at the entity's strategic objectives, listing the possible measures for those

objectives and then choosing one measure for use in determining what the order quantity

for a specified part should be.

Ferreri further discloses a process for selecting which part to run through the MRP, and in

particular, looks at selecting the "high level components" wherein "high level

components are those which have a relative cost that exceeds a predetermined percentage

of the product being manufactured" column 2, lines 59 – 61 in order to optimize the

review process for the results of the MRP system. Ferreri does not review the strategic

objectives or any of the potential measures related to those strategic objectives to

determine which measures should be modified in the MRP system in order to determine

the order quantity or lot sized requirements for a given part. Ferreri utilizes the same

formula (the economic order quantity) for determining lot sizes for components that has

been in use for the past 60 years or more without modification.

In contrast, the instant invention does not care what part is selected to run through the

MRP nor does it work to minimize those costs. Rather, the instant invention evaluates

and redefines the process used to determine what the optimal order quantity or lot size is

as determined by the organization's priority of its strategic objectives and subsequent

measure and by the forecasted orders only.

Furthermore, Ferreri does not run the MRP for a planning period as if the current work or

activities were in fact already completed per the existing schedule, but rather generates

the historical report upon the actual historical usage of high level component parts, runs

the MRP to determine the lot size or order quantity based upon the forecasted demand for

the component and then compares the forecasted lot size or order quantity with the

historical demand to look for abnormalities. All of this being based upon the forecasted

demand and the economic order calculation formula.

Nor does Ferreri determine a first expected results as measured in terms of the strategic

objective measure. Rather, Ferreri uses the actual historical demand history of a

component for a comparison to the forecasted demand to establish if the forecasted

demand looks reasonable in light of actual historical usage. In contrast, the instant

invention uses the forecasted demand (no use of historical data whatsoever) for a given

component to be utilized to determine its impact on the strategic objective in order to

establish an order quantity for that component based upon it's impact on the strategic

objective, which is not based upon minimizing costs.

As to Ferreri taking the first expected results and subtracting the second expected results

to determine the impact said data has on the strategic objective, that is not the case.

Ferreri takes the actual historical usage of a given component and compares it to the

proposed economic order quantity for the same components based upon the forecasted

demand to determine if the quantity forecasted is reasonable *in light of the historical

usage*. The difference between the historical usage and the forecasted usage by Ferreri is

only relevant if the difference is significant to the user. If not, the difference is ignored.

The instant invention is utilizing the MRP run of the forecasted demand with and without

a given component to determine the impact of the given component by subtracting *the

expected results* of the MRP runs, as measured terms of the strategic objective (not

quantity) to determine the impact a given part has on the strategic objective. That impact is then utilized to determine the right order quantity the supports the strategic objective. The absolute difference is relevant and utilized with out regard to the magnitude of the difference in the instant invention.

As to steps f – j, Ferreri does not disclose running the MRP as if the work was in fact already run. Given the current MRP tools and structure, if the jobs under Ferreri were already assumed as having been run, the MRP would generate a work list of nothing to do as the work would have been completed already and thus there would be no need to schedule work to be done. In addition, the concepts of "dependent" and "independent" demand are well known in the art. Dependent demand includes those parts or orders that are required because they depend from a larger end product – ex. A steering wheel for a new car order. Independent demand are orders that stand alone such as for replacement parts – ex; 4 new tires to replace exiting worn out tires on an existing car.

In addition, Ferreri's determination of a "DELTA" in determining the new order or lot size is based purely upon economic order quantity and the deviation of the exiting forecasted order quantities to those historically run. The instant invention determines the order size based upon the impact to the strategic objectives of the company and have no relationship to the historical usage nor to the economic order quantity.

Thus, we believe that the instant invention is novel and of significant commercial value and use. Furthermore, we believe that the instant invention does not read upon Ferreri's patent or any other information found by the inventor in either form, function or intent.

Other Changes to the Claims:

The terms "appropriate" and "temporarily" have been removed for clarity purposes. In many instances the term "the said" has been changed to "said". The term "programs" have been replaced with "MRP, MRP II and MIS" for clarity. Claims 5, 11, 17 and 23 have been amended to read on the independent claim rather than on the dependant claim.

Summary:

Given the modifications, changes and discussion above, it is believed that the claims, as modified, should not be denied based upon Ferreri, Keeler or Eck and, as such, should be allowed.

Respectfully submitted,

John K McCormick